

## The PREFACE.

by the same way, not only by beholding and contemplating, but by tasting too those fruits of Natural knowledge, that were never yet forbidden.

From hence the World may be assisted with variety of Inventions, new matter for Sciences may be collected, the old improv'd, and their rust rubb'd away; and as it is by the benefit of Senses that we receive all our Skill in the works of Nature, so they also may be wonderfully benefited by it, and may be guided to an easier and more exact performance of their Offices; 'tis not unlikely, but that we may find out wherein our Senses are deficient, and as easily find wayes of repairing them.

The Indeaours of Skilful men have been most conversant about the assistance of the Eye, and many noble Productions have followed upon it; and from hence we may conclude, that there is a way open'd for advancing the operations, not only of all the other Senses, but even of the Eye it self; that which has been already done ought not to content us, but rather to encourage us to proceed further, and to attempt greater things in the same and different wayes.

'Tis not unlikely, but that there may be yet invented several other helps for the eye, as much exceeding those already found, as those do the bare eye, such as by which we may perhaps be able to discover living Creatures in the Moon, or other Planets, the figures of the compounding Particles of matter, and the particular Schematisms and Textures of Bodies.

And as Glasses have highly promoted our seeing, so 'tis not improbable, but that there may be found many Mechanical Inventions to improve our other Senses, of hearing, smelling, tasting, touching. 'Tis not impossible to hear a whisper a furlongs distance, it having been already done; and perhaps the nature of the thing would not make it more impossible, though that furlong should be ten times multiply'd. And though some famous Authors have affirm'd it impossible to hear through the thinnest plate of Muscovy-glass; yet I know a way, by which 'tis easie enough to hear one speak through a wall a yard thick. It has not been yet thoroughly examin'd, how far Otocousticons may be improv'd, nor what other wayes there may be of quickning our hearing, or conveying sound through other bodies then the Air: for that that is not the only medium, I can assure the Reader, that I have, by the help of a distended wire, propagated

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gated the sound to a very considerable distance in an instant, or with as seemingly quick a motion as that of light, at least, incomparably swifter then that, which at the same time was propagated through the Air; and this not only in a straight line, or direct, but in one bended in many angles.

Nor are the other three so perfect, but that diligence, attention, and many mechanical contrivances, may also highly improve them. For since the sense of smelling seems to be made by the swift passage of the Air (impregnated with the steams and effluvia of several odorous Bodies) through the grisly meanders of the Nose whose surfaces are cover'd with a very sensible nerve, and moistned by a transudation from the processus mamillares of the Brain, and some adjoining glandules, and by the moist steam of the Lungs, with a Liquor convenient for the reception of those effluvia and by the adhesion and mixing of those steams with that liquor, and thereby affecting the nerve, or perhaps by insinuating themselves into the juices of the brain, after the same manner, as I have in the following Observations intimated, the parts of Salt to pass through the skins of Eggs, and Frogs. Since, I say, smelling seems to be made by some such way, 'tis not improbable, but that some contrivance, for making a great quantity of Air pass quick through the Nose, might as much promote the sense of smelling, as the any wayes hindring that passage does dull and destroy it. Several tryals I have made, both of hindring and promoting this sense, and have succeeded in some according to expectation; and indeed to me it seems capable of being improv'd, for the judging of the constitutions of many Bodies. Perhaps we may thereby also judge (as other Creatures seem to do) what is wholesome, what poyson; and in a word, what are the specifick properties of Bodies.

There may be also some other mechanical wayes found out, of sensibly perceiving the effluvia of Bodies; several Instances of which, were it here proper, I could give of Mineral steams and exhalations; and it seems not impossible, but that by some such wayes improved, may be discovered, what Minerals lye buried under the Earth, without the trouble to dig for them; some things to confirm this Conjecture may be found in Agricola, and other Writers of Minerals, speaking of the Vegetables that are apt to thrive, or pine, in those steams.

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